

Office Action Summary

Application No.

10/783,826

Applicant(s)

CHIU ET AL.

Examiner

Anthony J. Canning

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8,10-13,15-17,19,21-25 is/are pending in the application.
- 4a) Of the above claim(s) 1-6,8,15-17 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-13 and 21-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/13/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Acknowledgement of Amendment

1. The amendment to the instant application was entered on 1 June 2006.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 10-13, 22 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Izumizawa et al. (U.S. 6,635,988 B1).
4. As to claim 10, Izumizawa et al. disclose an organic luminescence display device comprising: one or more display elements (see Fig. 8; column 2, lines 19-20); at least one moisture detector placed in a predetermined location close to the display elements (see Fig. 8, item 6; column 3, lines 55-57), the moisture detector including a material layer including metal (column 4, lines 4-18) formed between a first electrode (see Figs. 6 and 8, item 2; see column 6, Embodiment 6) and a second electrode (see Figs. 6 and 8, item 10; column 8, lines 17-22 and column 8 lines 30-34; item 10 can be conductive, when the anode insulating layer 11 is present; the examiner interprets item 10 to be an electrode since it can be conductive); and a first and

second shields for encapsulating the display elements (see Fig. 8, items 1 and 9; column 6, lines 39-54) and the moisture detector therebetween (see Fig. 8, item 6), wherein the material layer between the first and second electrodes of the moisture detector has a resistance that varies with a moisture level of an environment in which the display device is located (the resistance of metallic calcium inherently varies with the uptake of moisture).

5. As to claim 11, Izumizawa et al. disclose the display device of claim 10. Izumizawa et al. further disclose that the moisture detector is placed in the predetermined location of the device so that it does not affect an operation of the display elements (see Fig. 7, items 1, 2, 4 and 6; column 6, lines 58-60; light will be emitted through the glass substrate, therefore, since the moisture detector layer is behind the organic emitting layer, the presence of the moisture detector will not affect the operation of the display elements).

6. As to claim 12, Izumizawa et al. disclose the display device of claim 10. Izumizawa et al. further disclose that the light transmissivity of the moisture detector varies with the moisture level of the environment in which the display elements are located (the light transmissivity of metallic calcium inherently varies with the uptake of moisture).

7. As to claim 13, Izumizawa et al. disclose the display device of claim 10. Izumizawa et al. further disclose that the material layer is a metal compound (column 4, lines 4-18).

8. As to claim 22, Izumizawa et al. disclose the display device of claim 10. Izumizawa et al. further disclose that the material layer of the moisture detector contains an IA or IIA group earth metal (column 4, lines 4-18; such as metallic calcium).

9. As to claim 23, Izumizawa et al. disclose the display device of claim 10. Izumizawa et al. further disclose that the material layer has a thickness of 200 angstroms or more (column 4, lines 34-37).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 10-13, 22, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. (J.P. 2003-157979,A; of record) in view of Sudoh et al. (U.S. 4,344,062).

12. As to claim 10, Kobayashi et al. disclose an organic luminescence display device comprising: one or more display elements (see Fig. 1b; where the electrodes, items 15 and 30, intersect are display elements; paragraph 0011); at least one moisture detector placed in a predetermined location close to the display elements (see Fig. 1, item 50; paragraph 0012), the moisture detector including a material layer including metal (paragraph 0012, calcium is an alkaline earth metal); and first and second shields for encapsulating the display elements (see Fig. 1a, items 10; paragraph 0011) and the moisture detector therebetween (see Fig. 1, items 10 and 50). Kobayashi et al. fail to specifically teach or disclose that the metal layer of the moisture detector is formed between a first and second electrode, and that the material layer between the first and second electrodes has a resistance that varies with a moisture level of an environment in which the display is located.

Sudoh et al. disclose a moisture sensor element with a metal layer (see Fig. 1, item 1; column 1, lines 56-66) formed between a first electrode (see Fig. 1, item 2, column 1, lines 65-67) and second electrode (see Fig. 1, item 3; column 1, lines 65-67), and that the material layer between the first and second electrodes has a resistance that varies with a moisture level of an environment (see Fig. 2; column 2, lines 57-62). Sudoh et al. further disclose that a moisture detector of the above configuration is durable, extremely stable, the sensitive speed is very quick, and can be manufactured at low cost (column 2, lines 57-65).

Therefore, it would have been obvious to one having ordinary skill in the art, at the time the invention was made, to modify the organic luminescence display device of Kobayashi et al., to include that the metal layer of the moisture detector is formed between a first and second electrode, and that the material layer between the first and second electrodes has a resistance that varies with a moisture level of an environment in which the display is located, as taught by Sudoh et al., for the added benefits of durability, stability, a quick sensitive speed, and low manufacturing cost.

13. As to claim 11, Kobayashi et al. and Sudoh et al. disclose the display device of claim 10. Kobayashi et al. further disclose that the moisture detector is placed in the predetermined location of the device so that it does not affect an operation of the display elements (see Fig. 1, item 50; paragraph 0012).

14. As to claim 12, Kobayashi et al. and Sudoh et al. disclose the display device of claim 10. Kobayashi et al. further disclose that the light transmissivity of the moisture detector varies with the moisture level of the environment in which the display elements are located (paragraph 0013, lines 1-7).

15. As to claim 13, Kobayashi et al. and Sudoh et al. disclose the display device of claim 10. Kobayashi et al. further disclose that the material layer is a metal compound (paragraph 0012, calcium is an alkaline earth metal).

16. As to claim 22, Kobayashi et al. and Sudoh et al. disclose the display device of claim 10. Kobayashi et al. further disclose that the material layer of the moisture detector contains an IA or IIA group earth metal (paragraph 0012, calcium is an alkaline earth metal).

17. As to claim 24, Kobayashi et al. and Sudoh et al. disclose the display device of claim 10. Kobayashi et al. further disclose the display elements form an array (see Fig. 1b; where the electrodes, items 15 and 30, intersect are display elements; paragraph 0011), the moisture detector is located proximate to a column of display elements located at an edge of the array (see Fig. 2b, item 50; paragraph 0014, lines 13-15; the examiner interprets the detector surrounding the viewing area to be located proximate the display elements), and the moisture detector extends from a first position (see 2b, item 50, the top horizontal portion of the detector) located proximate to a top edge of a top display element of the column of display elements to a second position located proximate to a bottom edge of a bottom display element of the column of display elements (see Fig. 2b, item 50, the bottom horizontal portion of the detector).

18. As to claim 25, Kobayashi et al. and Sudoh et al. disclose the display device of claim 10. Kobayashi et al. further disclose the display elements are disposed to form an array pattern including a plurality of element regions (see Fig. 1b; where the electrodes, items 15 and 30, intersect are display elements; paragraph 0011), and the moisture detector is disposed at an element region located at a corner of the array pattern (see Drawing 2b, item 50; paragraph 0014,

lines 13-15; the examiner interprets the detector surrounding the viewing area to be located at an element region located at a corner of the array pattern).

19. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Izumizawa et al. (U.S. 6,635,988 B1).

20. As to claim 21, Izumizawa et al. disclose the display device of claim 10. Izumizawa et al. fail to specifically disclose that the material of the first and second electrodes is the same as that of the cathode and anode, although one of the first or second electrode is the cathode or anode. It would have been obvious to one having ordinary skill in the art at the time the invention was made to disclose that the material of the first and second electrodes is the same as that of the cathode and anode, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ.

Response to Arguments

21. Applicant's arguments with respect to Izumizawa failing to disclose a moisture layer between a first and second electrode, the examiner respectfully disagrees. Figures 6 and 8 of Izumizawa disclose an anode (item 2; column 7, lines 64-67), an anode insulating layer (item 11; column 7, lines 64-67), and a conductive preliminary moisture reaction layer (item 10; column 8, lines 30-34). The examiner interprets the conductive preliminary moisture reaction layer to be an electrode.

Final Rejection

22. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony J. Canning whose telephone number is (571)-272-2486. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh D. Patel can be reached on (571)-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Anthony Canning *AC*
14 August 2006

Karabi Ghoshay
8/21/06